

What is claimed is:

sub B.7 (1. A combination, comprising:

a chamber;

a processing line passing through said chamber;

5 a first pipe disposed within said chamber, said first pipe being connected to a source of a first liquid;

a first nozzle operably connected to said first pipe;

a second pipe disposed within said chamber, downstream of said first pipe, said second pipe being connected to a source of a second liquid that is different from said first liquid;

10 a second nozzle operably connected to said second pipe;

a third pipe disposed within said chamber, downstream of said second pipe, said third pipe being connected to said source of said first liquid;

a third nozzle operably connected to said third pipe; and

a plurality of workpieces operably connected to said processing line, said plurality of workpieces being selected from the group consisting of meat, poultry, other foodstuffs, and food packaging.

2. The combination of claim 1, wherein said first liquid is water and said second liquid is an antimicrobial.

3. The combination of claim 1, further comprising:

a first baffle secured to said chamber downstream of said first pipe and upstream of said second pipe; and

a second baffle secured to said chamber downstream of said second pipe and upstream of said third pipe.

4. The combination of claim 1, wherein said first and third nozzles comprise flat spray nozzles and said second nozzle comprises a full cone pressure nozzle.

5. The combination of claim 1, further comprising a first control valve operably connected to said first pipe and a second control valve operably connected to said third pipe.

6. The combination of claim 1, wherein said first nozzle is aligned to discharge said first liquid in a downward direction.

7. The combination of claim 6, wherein said first nozzle is aligned to discharge said first liquid so that said first liquid does not contact said plurality of workpieces.

8. The combination of claim 1, further comprising:

a fourth pipe disposed within said chamber, downstream of said second pipe and upstream of said third pipe, said fourth pipe being connected to said source of said second liquid; a fourth nozzle operably connected to said fourth pipe.

9. A method, comprising:

(a) providing a chamber;

(b) creating a treatment zone within said chamber for applying a substance to a plurality of workpieces, said plurality of workpieces being selected from the group consisting of meat, poultry, other foodstuffs, and food packaging;

(c) creating a first liquid barrier within said chamber downstream of said treatment zone; and
(d) passing said plurality of workpieces through said treatment zone and above or through said first liquid barrier.

10. The method of claim 9, further comprising creating a second liquid barrier upstream of said treatment zone.

11. The method of claim 9, wherein said substance comprises an antimicrobial, and step (b) comprises creating said treatment zone within said chamber for applying said antimicrobial to said plurality of workpieces.

12. The method of claim 11, wherein said first liquid barrier comprises water, said plurality of workpieces comprises a plurality of poultry, and step (d) comprises passing said plurality of poultry through said treatment zone and above or through said water.

13. The method of claim 9, wherein step (c) comprises using water to create said first liquid barrier within said chamber downstream of said treatment zone.

14. The method of claim 9, wherein step (c) comprises spraying water to create said first liquid barrier within said chamber downstream of said treatment zone.

15. The method of claim 14, wherein said water is sprayed at a flow rate that is substantially within a range of from approximately 0.35 gallons per minute per nozzle to approximately 1.5 gallons per minute per nozzle.

16. The method of claim 9, wherein step (b) comprises spraying said substance to create said treatment zone within said chamber for applying said substance to said plurality of workpieces.

17. The method of claim 16, wherein said substance is sprayed at a flow rate that is substantially within a range of from approximately 0.35 gallons per minute per nozzle to approximately 1.5 gallons per minute per nozzle.

18. The method of claim 9, wherein step (c) comprises spraying water at a first rate to create said first liquid barrier within said chamber downstream of said treatment zone; and further comprising, spraying water at a second rate to create a second liquid barrier within said chamber, upstream of said treatment zone, said first rate being different from said second rate.

19. The method of claim 18, wherein said first rate is greater than said second rate.

20. An apparatus, comprising:

a chamber;

means for spraying water to create a first liquid barrier within said chamber;

means for spraying an antimicrobial to create a treatment zone within said chamber, said treatment zone being upstream from said first liquid barrier;

means for spraying water to create a second liquid barrier within said chamber, said second liquid barrier being upstream from said treatment zone; and

means for passing a plurality of workpieces through said chamber so that said plurality of workpieces passes above or through said second liquid barrier, then through said treatment zone, then above or through said first liquid barrier, said plurality of workpieces being selected from the group consisting of meat, poultry, other foodstuffs, and food packaging..